

## FOURIER MOIRE WAVEFRONT SENSOR

### ABSTRACT OF THE DISCLOSURE

An apparatus and method for wavefront sensing that includes: employing two moiré gratings in  
5 an optical path; optically Fourier transforming a moiré deflectogram produced by the gratings; variably  
transmitting the transformed moiré deflectogram; and receiving an image of the variably transmitted and  
transformed moiré deflectogram. The variable transmission is best accomplished by transmission filter,  
a transmissive optic encoding intensity information upon the moiré deflectogram as a function of fringe  
angle. For example, the function can be a triangular transmission function centered on the (0,0) order  
10 spatial frequency spot and oriented at 45 degrees to the y-axis. The optical Fourier transform is  
accomplished by a lens and the variable transmission by an apodized slit.